ARGUMENTS/REMARKS

Reconsideration of the above-identified application in view of the present amendment is respectfully requested. Claims 26-32 are pending. Claim 26-32 are amended.

A new abstract is added to the application after the claims to fulfill the requirement under 37 CFR 1.72(b). Th specification is amended on page 24 to replace the phrase " opposed transmitter" with the phrase "the opposite transmitter" per the examiner's suggestion in order to overcome the objection to the specification.

Claims 26-31 are also amended to replace "clock transition" with "clock transition signal" in all instances throughout claims 26-31 per the examiner's suggestion in it 4 of this paper. Claims 27-31 are amended to replace "cloc state" with "clock logic level" in all instances throughout claims 27-31. Support for the "clock logic level" phrase i found at page 25, line 15 to page 26, line 8.

Claim 29 is amended to replace the phrase "oscillating loop" with "a loop" and to replace the phrase "the oscillat signal" with "an oscillating clock transition signal passin around the loop" to provide proper antecedent basis for the limitations. Claim 30 is amended to replace the phrase "lo to begin oscillating" with "oscillating clock transmission begin passing around the loop". Claim 31 is amended to replace the phrase "an oscillating loop" with "a loop" to provide sufficient antecedent basis for "the loop" in claim 31 and 32. These amendments are supported by the descripti

at page 24, line 20 to page 36, line 19, which refers repeatedly to the loop and explains its operation in detail.

Claims 27 and 28 are amended to replace the phrase "the first" with "the first clock logic level" as suggested by the examiner to provide sufficient antecedent basis for the "the first clock logic level" limitation. Claim 29 is amended to replace "the oscillating signal" with "an oscillating clock transmission signal passing around the loop" to provide the proper antecedent basis. All of the above-mentioned amendments to claims 26-32 overcome their rejection under 35 U.S.C. 112 for items 3, 4, and 6-8 of this paper. Claims 26-31 are also amended to comply with 37 CFR 1.75 and for better form.

The rejection of claim 32 under 35 U.S.C. 112 for item 5 of this paper is respectfully traversed. Amended claim 31 requires that the transitions traveling around the loop are used "to provide a clock signal" while amended claim 32 requires that the transitions are used "as said clock signal" The feature of claim 31 that the transitions are used "to provide a clock signal" includes both the feature set out in claim 32 that the transitions are used as the clock signal and the feature that the transitions are processed in some way to provide a clock signal but not directly used as said clock signal. Therefore, amended claim 32 further limits claim 31. Thus, the rejection of claim 32 under 35 U.S.C. 112 should be withdrawn.

Claims 26-28 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bontemps and further in view of Ru This rejection is respectfully traversed.

The M.P.E.P. sets forth the criteria for a rejection obviousness under 35 U.S.C. §103 as follows:

> To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure.

See, M.P.E.P. § 706.02(j) *citing* In re Vaeck, 947 F.2d 488, USPQ2d 1438 (Fed. Cir. 1991).

As previously mentioned for a valid 35 U.S.C. 103, the prior art reference (or references when combined) must tea or suggest all the claim limitations. Yet, in this case, t combination of Bontemp and Ruane does not teach or suggest of the claim limitations of claim 26. In particular, neit Bontemp nor Ruane disclose or suggest that the first communications section is arranged to respond to reception a clock transition signal along a first communications lin transmitting a clock transition signal having the same polarity back along said first communications link. Also, neither Bontemp nor Ruane disclose or suggest that the sec communications section is arranged to respond to reception a clock transition signal along a second communications lir

by transmitting a clock transition signal having the opposite polarity back along said second communications link.

By contrast, Ruane teaches a method by which a first network device can determine whether it is connected to a second network device directly or whether there are intermediate network devices between the first and second network devices. In the text referenced by the Examiner at column 2, lines 60 to column 3, line 5, Ruane explains that this method includes a first device sending and then stopping the sending of a link active signal to the second device. After stopping the sending of the link active signal, the first device waits for a reply message from the second device indicating that the second device has detected a stopping of the link active signal. This procedure is repeated a number of times.

The examples of the procedure shown in figures 6 and 7 o Ruane are referred to at column 6, lines 55 to 60, which the examiner also references. These examples show various arrangements of directly and indirectly interconnected networ devices. However, these examples all relate to the method of Ruane in which the first network device sends a link active signal and a second network device monitors reception of the link active signal and responds to a stopping of the link active signal by sending a reply message that stopping of the link active signal has been detected.

This method of Ruane fails to disclose that the first communications section is arranged to respond to reception of a clock transition signal along a first communications link b

transmitting a clock transition signal having the same polarity back along said first communications link. This meth of Ruane also fails to disclose a second communications section that is arranged to respond to reception of a clock transition signal along a second communications link by transmitting a clock transition signal having the opposite polarity back along the second communications link. As also stated by the Examiner, Bontemp too fails to teach of responding to a signal with the same or opposite polarity.

Further, there is no suggestion anywhere in Ruane that a device should respond to reception of a signal along a first communication link by transmitting a signal having the same polarity along the first communication link and should respo to reception of a signal along a second communications link transmitting a signal having the opposite polarity along the second communication link as required by Claim 26. Ruane on teaches a sending of a reply message to indicate detection o the loss of the link active signal. Ruane does not suggest any way that signals having different polarities should be sent on different communications links.

Finally, the method of Ruane is intended only to detect whether two different network devices are directly or indirectly connected and thus, there would be no purpose in this method in sending signals of opposite polarity along different communication links.

Accordingly, a person normally skilled in the art would not be motivated by Ruane to modify the device of Bontemps t arrive at Claim 26 because neither the above-mentioned claim

features nor any motive for making them are disclosed in Ruane. It is respectfully suggested that the rejection of claim 26 under 35 U.S.C. 103(a) fails to establish a prima facie case for obviousness. Thus, it is respectfully submitted that the rejection of claim 26 is improper and allowance of claim 26 is respectfully requested.

Claim 27, which depends from claim 26, should be allow for the same reason as claim 26 and also for the additional feature that the first communications section holds a first clock logic level and an output, when the first communicati section is not connected to another device, and the second communications section holds a second clock logic level hav an opposite polarity to the first clock state logic level a an input, when the second communications section is not connected to another device. Neither Bontemp nor Ruane nor any of the other prior art disclose or suggest this feature

Claim 28, which depends from claim 26, should be allow for the same reasons as claim 26 and also for the additiona feature that the second communications section holds a firs clock logic level as an output, when the second communicati section is not connected to another device, and the first communications section holds a second clock logic level hav an opposite polarity to the first clock state logic level a an output, when the first communications section is not connected to another device. Neither Bontemp nor Ruane nor any of the other prior art disclose or suggest this feature

In the rejection of claims 27 and 28, the Examiner suggests that Bontemps teaches when the first communicatior

section is not connected it holds a first clock state (LINK_DETECT1 signal is low). However, this feature is not disclosed by Bontemps. Bontemps teaches that each PHY devic 218 linked to a port which may be connected to a communications link is able to generate a LINK_DETECT signa However, figures 2 and 3 and the corresponding description Bontemps clearly show that the LINK_DETECT signals are sent each respective PHY device to a mode control circuit 222 forming part of the communication device.

The LINK DETECT signal of Bontemps is not made availab to other devices along the communications link and sent onl to the mode control circuit of the device to indicate wheth or not each communications port of the device is connected a communications link. Accordingly, the LINK_DETECT signal Bontemps cannot be regarded as corresponding to the clock state of Claims 27 and 28 because the LINK DETECT signal is not provided as an output of the device.

Further, it is explained in Bontemp at column 10, line 55 to 56 that the LINK_DETECT signal is set high to indicat that the PHY device is connected to a communications link a set low to indicate that the PHY device is not connected tc communications link. Accordingly, having some PHY devices generate a LII'TK_DETECT signal of opposite polarity as suggested by the Examiner would cause the LINK_DETECT signa of different PHY devices to use a different polarity to indicate the connection state. This will make the device r complex and less efficient because of the requirement to interpret the LINK DETECT signals differently based upon tl

identity of the issuing PHY device. Accordingly, the feature of Claims 27 and 28 are not disclosed or suggested by Bontemps. Therefore, claims 27 and 28 are allowable.

Claims 29-31 stand rejected as being unpatentable over Bontemps and Ruane and further in view of Haartsen. This rejection is respectfully traversed. First, claims 29-31 depend from claim 26 and are therefore allowable for the same reasons as claim 26. Further, there is no suggestion or motivation to combine the teachings of Bontemp and Ruane with Haartsen.

Haartsen discloses an oscillator device formed by an oscillating loop. It is submitted that the disclosure of Haartsen, which discloses an oscillator that can be formed by an oscillating loop, does not provide any motivation to one of ordinary skill in the art to interconnect two devices according to Claim 26 so that they form a loop having an oscillating clock transmission signal passing around it according to Claim 29.

Further, Claim 29 specifies that communication over the communication link is controlled by an oscillating clock transition signal clock signal passing around the loop. There is nothing anywhere in Bontemps to suggest in any way that communication along the communication link should use an oscillating clock transmission signal passing around a loop formed by the communication link as a clock signal, and there is nothing in the disclosure of the oscillating loop of Haartsen which would suggest such a possibility to one skilled in the art.

A person skilled in the art reading Bontemps and Haarts together would be motivated only to consider using the self contained oscillator of Haartsen as the clock circuit of Bontemps. However, such use of the oscillating loop based oscillator of Haartsen as the clock circuit of the device of Bontemps would not suggest the features of Claim 29 to one c ordinary skill. Claim 30, which depends on claim 29, shoulc be allowed for the same reasons as claim 30 and further for the feature that when the first and second communication sections are first linked, the difference between their held input and output clock logic levels causes the oscillating clock transition signals to begin passing around the loop. Therefore, in view of the above-mentioned reasons claims 29 and 30 are allowable.

Claims 31-32 stand rejected under 35 U.S.C. 103 as bein unpatentable over Bontemps, Ruane and Haartsen. This rejecti is respectfully traversed. Neither Bontemps nor Ruane nor Haartsen either alone or in combination disclose or suggest all of the features of claim 31. Ruane does not teach responding to a signal by sending a signal, but instead teaches responding to the stopping of sending a signal by sending a reply signal. Accordingly, Ruane does not teach responding to a signal by sending a return signal. Further, observe that although Bontemps discloses the existence of an inverter 408, this is provided only as a part of the cross over selection signal used within a device as a control sign to control the select logic. There is no disclosure or

suggestion anywhere in Bontemps that the inverter should be used to invert any received or transmitted signals.

Further, Ruane discloses a method by which network devices can detect whether or not they are directly connectec to other network devices. This method is entirely unrelated to the network according to Claim 31, which uses an oscillating clock transition signal traveling around a loop formed by two devices connected by a bi-directional communication link to provide a clock signal to control data transfer along the communication link.

Accordingly, there would be no reason whatsoever for the person of ordinary skill in the art to be motivated by the above-mentioned teaching of Ruane to modify the device of Bontemps to add the feature of a first device of responding t a received clock transition signal along a communications lir by sending a signal having the same polarity back along the communications link and a second device responding to a received clock transition signal along a communications link by sending a signal having the opposite polarity back along the locations link according to Claim 31. This defined response made by the different communication devices to received signals is not disclosed in either Bontemps or Ruan so it cannot be understood from their combination.

Regarding Haartsen, although Haartsen does teach existence of an oscillating loop, this would not motivate on of ordinary skill in the art to connect two devices of a communication network to form a loop generating a clock transition signal according to Claim 31. It is submitted th.

although Haartsen discloses advantages of an oscillating loop or forming an oscillator, these advantages would be understoo by a one of ordinary skill reading Bontemps as being applicable to the clock generating part of Bontemps and not a suggestion of the features of the Claim 31.

It is respectfully suggested that the rejection of claim 31 under 35 U.S.C. 103(a) fails to establish a prima facie case for obviousness. Thus, it is respectfully submitted tha the rejection of claim 31 is improper and allowance of claim 31 is respectfully requested. Claim 32, which depends from claim 31, should be allowed for the same reason as claim 31 and also for the additional feature that the clock transition signals traveling around the loop are used as said clock signal. Neither Bontemp nor Ruane nor Haartsen nor any of the other prior art disclose or suggest this feature and all of the limitations of claim 31. Therefore, claim 32 is allowable.

In view of the foregoing, it is respectfully submitted that the above-identified application is in condition for allowance, and allowance of the above-identified applicatic is respectfully requested.

Please charge any deficiency or credit any overpayment the fees for this amendment to our Deposit Account No. 20-0090.

Respectfully submitted,

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